REMARKS

Claims 1-35 are all the claims pending in the application.

The Examiner has objected to Fig. 1, asking Applicants to add a legend for prior art. Applicants have amended Fig. 1 accordingly.

Claims 1-35 stand rejected under 35 U.S.C. §102(e) as being anticipated by Murata (U.S. Patent Application Publication #2004/0096220). Applicants respectfully traverse these rejections, and request reconsideration and allowance of the pending claims in view of the following arguments.

The present invention is directed to the transmission of error control data using wavelength division multiplexing (WDM). It is well known to generate error control data from information data and to send both the error control data and information data, with the error control data then being used at the receiving end to ensure correct reception of the information data. According to the present invention, in a WDM system having multiple channels, the error control data and the information data to which it corresponds are transmitted on different WDM channels. One of the advantages of this is that it is not necessary to increase the bit rate of a channel in order to simultaneously send information and error control data in the same channel, was typically done in the past. In the implementation according to the invention, the multiple information channels are each block coded at 12 and the error control data blocks from multiple channels are all supplied to one output (e.g., $\lambda 1$) of the encoder for transmission on one WDM channel while the information blocks are provided to respective outputs (e.g., $\lambda 2$-$\lambda 5$) for

transmission on respective other WDM channels. The error control and information data are re-associated with one another at the receive end.

Claim 1 recites a method of transmitting digital data which includes data of a first type and data of a second type, the second type being data associated with control of errors in corresponding data of the first type, wherein at least one block of the second type data is derived from the first type data in only one channel. However, Murata only discloses generating error correction bits from data from several channels.

As shown in Fig. 2 of Murata, an encoder 5 provides a signal of n bits comprising k bits from channels CH_1 to CH_k and the generated (n-k) error correction bits to a phase alignment unit 6. In Fig. 3 of Murata, the encoder includes exclusive –OR logic circuits 15-1, 15-2, and 15-3 and performs a Hamming coding to generate the error corrections bits. The data corresponding to the channels CH1 to CH4 are denoted as D1 to D4, and the error correction bits generated by the encoder are denoted as D5 to D7. Each of the error correction bits D5 to D7 is generated from data from three channels.

In Fig. 5 of Murata, a parity generator 25 receives data from channels CH_1 to CH_k, calculates a parity bit for the transmission data from these channels, and outputs the calculated parity bit together with the k transmission data, thus passing (k+1) bit data to a phase alignment unit 26. An electrical-optical converter 27 converts the (k+1) data to (k+1) optical signals having different wavelengths λ_1 to λ_{k+1}. The parity bit is calculated for the transmission data in channels CH_1 to CH_k, not for data in only one channel.

Although Murata uses error monitoring bytes, each of the error monitoring bytes is in a Section Over Head (SOH) added to one of the channels CH_1 to CH_k, and is transmitted together with the transmission data via one of the channels CH_1 to CH_k. Thus, the error monitoring bytes are not transmitted via a channel different from that for the transmission data, and do not correspond to data of the second type recited in claim 1.

The independent claims have now been amended to emphasize that at least some of the error control data sent in one cahnnel is derived from information data in only one of the other channels. This is not the case in Murata. Further, it would not have been obvious to modify Murata to derive its error control data from only one channel **and** to transmit the error control data in a separate channel. When generating the error control data across multiple channels, there is no single channel to associate it with and there may be some logic in not associating it with any one channel but instead sending it in a separate channel. But in a system where the the error control data is generated from information data in a single channel, the error control data has always been sent together with the information data in that channel.

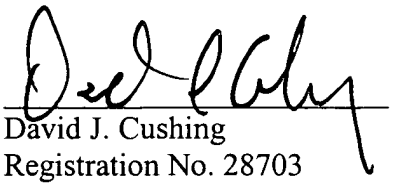
Thus, claim 1 and its dependent claims 2-15 are patentable. Claims 16-23, 24-31, 32-33, 34 and 35 are patentable for the same reasons.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No. 09/920,746

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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23493
CUSTOMER NUMBER

Date: September 30, 2004